

1     **REMARKS:**

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3             The objections in the 12/15/2004 Office Action shall be  
4 addressed in order of their occurrence in that Office Action  
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6  
7                     **Claim Rejections - 25 USC § 102**  
8

9             The 12/15/2004 Office Action objected to Claims 1-4  
10 under "35 U.S.C. 102(B) as being anticipated by Langner et  
11 al 6,264,401."  
12

13             Langner et al. shows a "subsea pipeline 10" (column 2,  
14 line 38) that is provided "with a system 10A for direct  
15 electric heating" (column 2, lines 38-39).  
16

17             Column 3, lines 6-12, of Langner et al. states the  
18 following: "Fig. 2 is a close up view of the direct electric  
19 pipeline heating system 10A. Pipeline 10 is shown to be a  
20 pipe-in-pipe flowline 30 having an electrically conductive  
21 carrier or outer pipe 32 and an electrically conductive  
22 product flowline or inner pipe 34 arranged longitudinally and  
23 substantially concentrically within the outer pipe. An  
24 annulus 36 is defined between the inner and outer pipe."  
25

26             Column 3, lines 54-58 of Langner et al. states the  
27 following: "It is necessary that inner pipe 34 be  
28 electrically isolated from outer pipe 32 along the entire  
29 length of pipe-in-pipe flowline 30. Direct contact is  
30 prevented with a plurality of electrically insulative  
31 centralizers 50 spaced at frequent intervals along  
32 annulus 36."  
33

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MAILED 12/15/2004"  
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1           The 12/15/2004 Office Action states in part in  
2 paragraph 3: "Lagner shows an apparatus having an  
3 electrically heated composite umbilical means 10 installed  
4 within a subsea flowline (fig 1) containing produced  
5 hydrocarbons....". Applicant respectfully disagrees with the  
6 definition of "composite" used in the 12/15/2004 Office  
7 Action as it pertains to applicant's Claims 1-4. Applicant  
8 interprets from the language used in the 12/15/2004 Office  
9 Action that the word "composite" may refer to: (a) an  
10 assembly of different parts; or (b) to the "insulative  
11 centralizers 50" described above.  
12

13           In contrast, in a preferred embodiment of the invention,  
14 a composite may be a "carbon-based composite material"  
15 (page 35, lines 17-19, of the specification).  
16

17           The specification contains reference to U.S. Patent  
18 No. 6,357,485 on page 18, lines 19-24, and an entire copy of  
19 that U.S. Patent was incorporated by reference therein into  
20 that specification. A copy of that U.S. patent was also  
21 separately incorporated by reference into the specification  
22 on page 24, lines 4-7. U.S. Patent No. 6,357,485 is entitled  
23 "Composite Spoolable Tube" that issued on March 19, 2002  
24 having the inventors of Quigley et al. A copy of Quigley et  
25 al. has been provided to the USPTO in the accompanying  
26 Invention Disclosure Statement (IDS).  
27

28           Column 7, lines 39-60, of Quigley et al. states the  
29 following: 'P.K. Mallick in the text book entitled *Fiber-*  
30 *Reinforced Composites, Materials manufacturing and Design,*  
31 defines a composite in the following manner: "Fiber-  
32 reinforced composite materials consist of fibers of high  
33 strength and modulus embedded in or bonded to a matrix with

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1 distinct interfaces (boundary) between them. In general,  
2 fibers are the principal load arraying [carrying] member,  
3 while the surrounding matrix keeps them in the desired  
4 location and orientation, acts as a load transfer medium  
5 between them, and protects them from environmental damages  
6 due to elevated temperatures and humidity, for example."  
7 This definition defines composites as used in this invention  
8 with the fibers selected from a variety of available  
9 materials including carbon, aramid, and glass and the matrix  
10 or resin selected from a variety of available materials  
11 including thermoset resin such as epoxy and vinyl ester or  
12 thermoplastic resins such as polyetheretherketone (PEEK),  
13 polyetherketoneketone (PEKK), nylon, etc. Composite  
14 structures are capable of carrying variety of loads in  
15 combination or independently, including tension, compression,  
16 pressure, bending ,and torsion."

17  
18 From the definition in Quigley et al., the pipe-in-a-  
19 pipe flowline in Langner et al is not an example of a  
20 "composite" material.

21  
22 Accordingly, applicant has amended Claim 1 with the  
23 following whereby clauses: "whereby said electrical  
24 conductor is surrounded by a composite material, and whereby  
25 said composite material is comprised of fibers of high  
26 strength embedded in a matrix material, whereby said fibers  
27 are selected from carbon fibers, aramid fibers and glass  
28 fibers, and whereby said matrix material is selected from  
29 thermoset resins and thermoplastic resins, whereby said  
30 thermoset resins include epoxy and vinyl ester, and whereby  
31 said thermoplastic resins include PEEK, PEKK, and nylon."  
32 The antecedent basis in the specification is defined above.  
33

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1 Accordingly, applicant respectfully submits that Claim 1 as  
2 currently amended is allowable over Langner et al.

3  
4 The 12/15/2004 Office Action also objected to Claims 2,  
5 3 and 4 based on Langner et. al. In view of the above  
6 discussion, applicant has added the following "whereas  
7 clauses" to the end of Claims 2, 3 and 4 as currently  
8 amended: ", whereby said electrically heated composite  
9 umbilical means possesses at least one electrical conductor  
10 disposed within said composite umbilical means that conducts  
11 electrical current that is used to heat said electrically  
12 heated composite umbilical means, whereby said electrical  
13 conductor is surrounded by a composite material, and whereby  
14 said composite material is comprised of fibers of high  
15 strength embedded in a matrix material, whereby said fibers  
16 include carbon fibers, aramid fibers and glass fibers, and  
17 whereby said matrix material includes thermoset resins and  
18 thermoplastic resins, whereby said thermoset resins include  
19 epoxy and vinyl ester, and whereby said thermoplastic resins  
20 include PEEK, PEKK, and nylon." In view of the above  
21 discussion, and in view of the amendments, applicant  
22 respectfully submits that Claims 3, 4 and 5 as currently  
23 amended are allowable over Langner et. al.

24  
25 Applicant appreciates Examiner allowing Claims 5 and 6.  
26 Thank you.

27  
28 Applicant respectfully submits that all the issues in  
29 the Office Action mailed 12/15/2004 have been fully addressed  
30 and that the application is now in a condition for  
31 allowability. Thank you.

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1     **PAYMENT OF FEES:**

2  
3             Vail's Inventions Check No. 8767 in the amount of sixty  
4 dollars (\$60) is included herein to pay for the following  
5 fees:

6  
7                     One-month extension                                     \$     60.00  
8

9             However, if the applicant has made a mistake on the  
10 payment of any fees herein, applicant requests that any such  
11 deficiencies be billed to Account No. 50-0499 that was  
12 established on 3/20/1998. Fees on patents and patent  
13 applications entirely owned, or owned in part, by William  
14 Banning Vail III may be made from this account. William  
15 Banning Vail III is doing business as an inventor under the  
16 name of "Vail's Inventions". Marilyn L. Vail, the wife of  
17 William Banning Vail III, may also direct that fees be paid  
18 from this Account No. 50-0499. If for unforeseen reasons  
19 funds are not available in that account, please let applicant  
20 know as soon as possible and said deficiencies will be paid  
21 immediately. In the event of overpayment of any fees herein,  
22 applicant respectfully requests that any overpayment be  
23 deposited into Account No. 50-0499.  
24  
25

26     **Pro-Se Case**

27  
28             This case herein is a pro-se case. Therefore, in the  
29 event that the USPTO objects to any, or all of the claims  
30 herein, applicant respectfully requests assistance from the  
31 Examiner under MPEP Section 707.07(j) to draft an acceptable  
32 claim based upon the disclosure and language in the  
33 application.

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1 Further, in the event that the Examiner rejects the  
2 claims, applicant requests that Examiner direct applicant  
3 to the claims closest to allowability, and if possible,  
4 applicant further requests that Examiner preliminarily  
5 mark-up one of said claims in a future office action to  
6 further aid applicant to achieve allowability of at least  
7 one claim in an expeditious fashion.

8  
9  
10 **DECLARATION:**

11  
12 As applicant, I hereby verify that all statements made  
13 herein of my own knowledge are true and that all statements  
14 made on my information and belief are believed to be true;  
15 and further that these statements were made with the  
16 knowledge that willful false statements and the like so made  
17 are punishable by fine or imprisonment, or both, under  
18 Section 1001 of Title 18 of the United States Code and that  
19 such wilful false statements may jeopardize the validity of  
20 the application or any patent issuing thereon.

21  
22 This application is filed pro-se. The applicant is  
23 using the book entitled "Patent It Yourself", Ninth Edition,  
24 by David Pressman, and if there are errors, please advise the  
25 inventor, and such errors will be corrected immediately.

26  
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28  
29 (Entire Signature on Next Page for Clarity)  
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1 Please address all correspondence involving this case to  
2 the co-inventor at the below defined address. Thank you.

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4  
5 Very respectfully submitted,

6  
7  
8 William Banning Vail III

5/15/2005

Date

9  
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31 (Note: This is the signature page of the document entitled  
32 "RESPONSE TO OFFICE ACTION MAILED 12/15/2004" for Serial  
33 No. 10/729,509.)

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